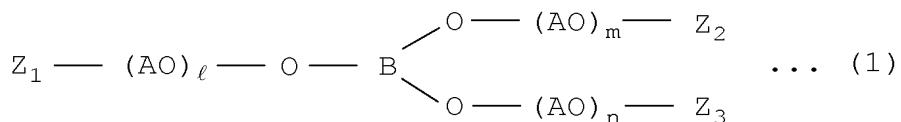


## **AMENDMENTS TO THE CLAIMS:**

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

**LISTING OF CLAIMS:**

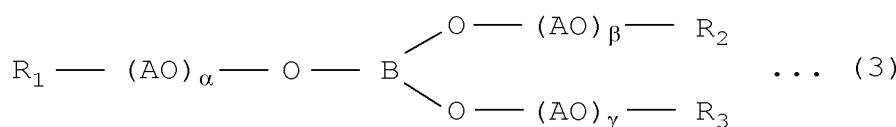
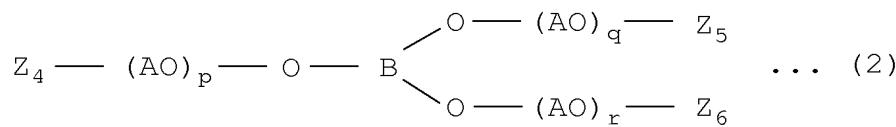
1. (Currently amended) A lithium secondary battery having a positive electrode and a negative electrode which reversibly intercalate and deintercalate lithium and an electrolyte containing an ion conductive material and an electrolytic salt, where said ion conductive material contains a boron-containing compound represented by the following formula (1):



wherein B represents a boron atom;  $Z_1$ ,  $Z_2$  and  $Z_3$  each represent an organic group having an acryloyl group or a methacryloyl group or a hydrocarbon group of 1-10 carbon atoms, with the proviso that one or two of  $Z_1$ ,  $Z_2$  and  $Z_3$  are the organic groups having an acryloyl group or a methacryloyl group; AO represents an oxyalkylene group of 1-6 carbon atoms and comprises one or two or more of the oxyalkylene groups; and  $\ell$ , m and n each represent an average degree of polymerization of the oxyalkylene group and is 1 or more than 0 and less than 4, provided that  $\ell+m+n$  is 34 or more.

2. (Original) A lithium secondary battery according to claim 1, wherein the electrolyte contains a polymer obtained by polymerizing the boron-containing compound represented by the formula (1).

3. (Previously presented) A lithium secondary battery having a positive electrode and a negative electrode which reversibly intercalate and deintercalate lithium and an electrolyte containing an ion conductive material and an electrolytic salt, where the ion conductive material comprises a polymerizable composition which contains a boron-containing compound represented by the following formula (2) and a boron-containing compound represented by the following formula (3):



wherein B represents a boron atom;  $Z_4$ ,  $Z_5$  and  $Z_6$  each represent an organic group having an acryloyl group or a methacryloyl group or a hydrocarbon group of 1-10 carbon atoms, with the proviso that at least one of  $Z_4$ ,  $Z_5$  and  $Z_6$  is said organic group having an acryloyl group or a methacryloyl group;  $R_1$ ,  $R_2$  and  $R_3$  each represent a hydrocarbon group of 1-10 carbon atoms; AO represents an oxyalkylene group of 1-6 carbon atoms and comprises one or two or more of the oxyalkylene groups; and p, q, r,  $\alpha$ ,  $\beta$  and  $\gamma$  each represent an average degree of polymerization of the oxyalkylene group and is more than 0 and less than 4, provided that each of the sum  $p+q+r$  and the sum  $\alpha+\beta+\gamma$  is 1 or more.

4. (Previously presented) A lithium secondary battery according to claim 3, wherein the molar ratio of the compound of the formula (2) and the compound of the formula (3) [(molar number of the compound of the formula (3))/( molar number of the compound of the formula (2))] is 0.1 to 9.

5. (Original) A lithium secondary battery according to claim 3, wherein the electrolyte contains a polymer obtained by polymerizing the polymerizable composition.
6. (Original) A lithium secondary battery according to claim 4, wherein the electrolyte contains a polymer obtained by polymerizing the polymerizable composition.
7. (Original) A lithium secondary battery according to claim 1, wherein the electrolytic salt is at least one of LiPF<sub>6</sub>, LiN(CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>, LiClO<sub>4</sub>, LiBF<sub>4</sub>, LiAsF<sub>6</sub>, LiI, LiBr, LiSCN, Li<sub>2</sub>B<sub>10</sub>Cl<sub>10</sub> and LiCF<sub>3</sub>CO<sub>2</sub>.
8. (Original) A lithium secondary battery according to claim 2, wherein the electrolytic salt is at least one of LiPF<sub>6</sub>, LiN(CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>, LiClO<sub>4</sub>, LiBF<sub>4</sub>, LiAsF<sub>6</sub>, LiI, LiBr, LiSCN, Li<sub>2</sub>B<sub>10</sub>Cl<sub>10</sub> and LiCF<sub>3</sub>CO<sub>2</sub>.
9. (Original) A lithium secondary battery according to claim 3, wherein the electrolytic salt is at least one of LiPF<sub>6</sub>, LiN(CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>, LiClO<sub>4</sub>, LiBF<sub>4</sub>, LiAsF<sub>6</sub>, LiI, LiBr, LiSCN, Li<sub>2</sub>B<sub>10</sub>Cl<sub>10</sub> and LiCF<sub>3</sub>CO<sub>2</sub>.
10. (Original) A lithium secondary battery according to claim 4, wherein the electrolytic salt is at least one of LiPF<sub>6</sub>, LiN(CF<sub>3</sub>SO<sub>2</sub>)<sub>2</sub>, LiClO<sub>4</sub>, LiBF<sub>4</sub>, LiAsF<sub>6</sub>, LiI, LiBr, LiSCN, Li<sub>2</sub>B<sub>10</sub>Cl<sub>10</sub> and LiCF<sub>3</sub>CO<sub>2</sub>.
11. (Previously presented) A lithium secondary battery according to claim 1, wherein the boron-containing compound represented by the formula (1) has a molecular weight of 300-1000.

12. (Previously presented) A lithium secondary battery according to claim 1, wherein the number of carbon atoms in A0 is 1-4.
13. (Currently amended) A lithium secondary battery according to claim 1, wherein each of  $\ell$ , m and n is 1-3, and  $\ell + m + n$  is 3-9. |
14. (Previously presented) A lithium secondary battery according to claim 1, wherein the boron-containing compound represented by the formula (1) has a molecular weight of 500-800.
15. (Previously presented) A lithium secondary battery according to claim 3, wherein each of the compounds represented by the formula (2) and by the formula (3) has a molecular weight of 300-1000.
16. (Previously presented) A lithium secondary battery according to claim 3, wherein each of the compounds represented by the formula (2) and by the formula (3) has a molecular weight of 500-800.
17. (Previously presented) A lithium secondary battery according to claim 3, wherein the number of carbon atoms in A0 is 1-4.
18. (Previously presented) A lithium secondary battery according to claim 3, wherein all of Z<sub>4</sub>, Z<sub>5</sub> and Z<sub>6</sub> are organic groups having an acryloyl group or a methacryloyl group.

19. (Previously presented) A lithium secondary battery according to claim 3, wherein p, q, r,  $\alpha$ ,  $\beta$  and  $\gamma$  are 1-3; and  $p+q+r$  and  $\alpha+\beta+\gamma$  are 3-9.

20. (Previously presented) A lithium secondary battery according to claim 4, wherein said molar ratio is 0.5 to 4.

21. (Previously presented) A lithium secondary battery according to claim 20, wherein said molar ratio is 1-2.5.